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U.S. Investment Opportunities in East German Agriculture After Unification

By

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The dramatic events in Eastern Europe in 1989 and 1990 have reshaped the political, military, and economic landscape of Europe in less time if not more fully than did either World War I or World War II. Nowhere has the change been more dramatic than in the former German Democratic Republic (GDR) or "East Germany." In just over one year East Germany went from open political and military hostility toward the West to union with former Federal Republic of Germany (FRG) or "West Germany."

The changes brought by political-economic union and European Community integration bring problems and promise to U.S. food and agriculture industries. The East German situation is unique: First, it will quickly convert to a market economy; second, its union with West Germany makes it a member of the European Community; third, its farm

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sector differs radically from that of the rest of the European Community and holds the promise of significant production increases once adjustment and modernization have taken place; and fourth, unlike its Eastern neighbors, it has a convertible currency, the Deutschemark.

The objective of this paper is an overview of the economic change taking place in the former GDR portion of greater Germany with an emphasis on promising areas for U.S. investment in East German agriculture and food industries. Emphasis is on investment because opportunities for sale of commodities will be modest.

Background

Until 1989 the German Democratic Republic (GDR) was a sovereign state whose leadership never considered unification with the Federal Republic of Germany (FRG) or an abandonment of communism and the centrally planned system. The GDR was formed in 1949 from the Soviet occupation zone of the defeated German Reich. Fully one-third of that German zone was trimmed off the eastern frontier and incorporated into the Soviet Union, Czechoslovakia, and Poland. Polish territory was shifted to the west and the Oder and Neisse rivers were established as the eastern boundary of Germany (see Figure 1). The capital city of Berlin lies in the (former) GDR just 80 kilometers west of the eastern border with Poland. For this reason, most Germans refer to the GDR not as East Germany but as Middle Germany.

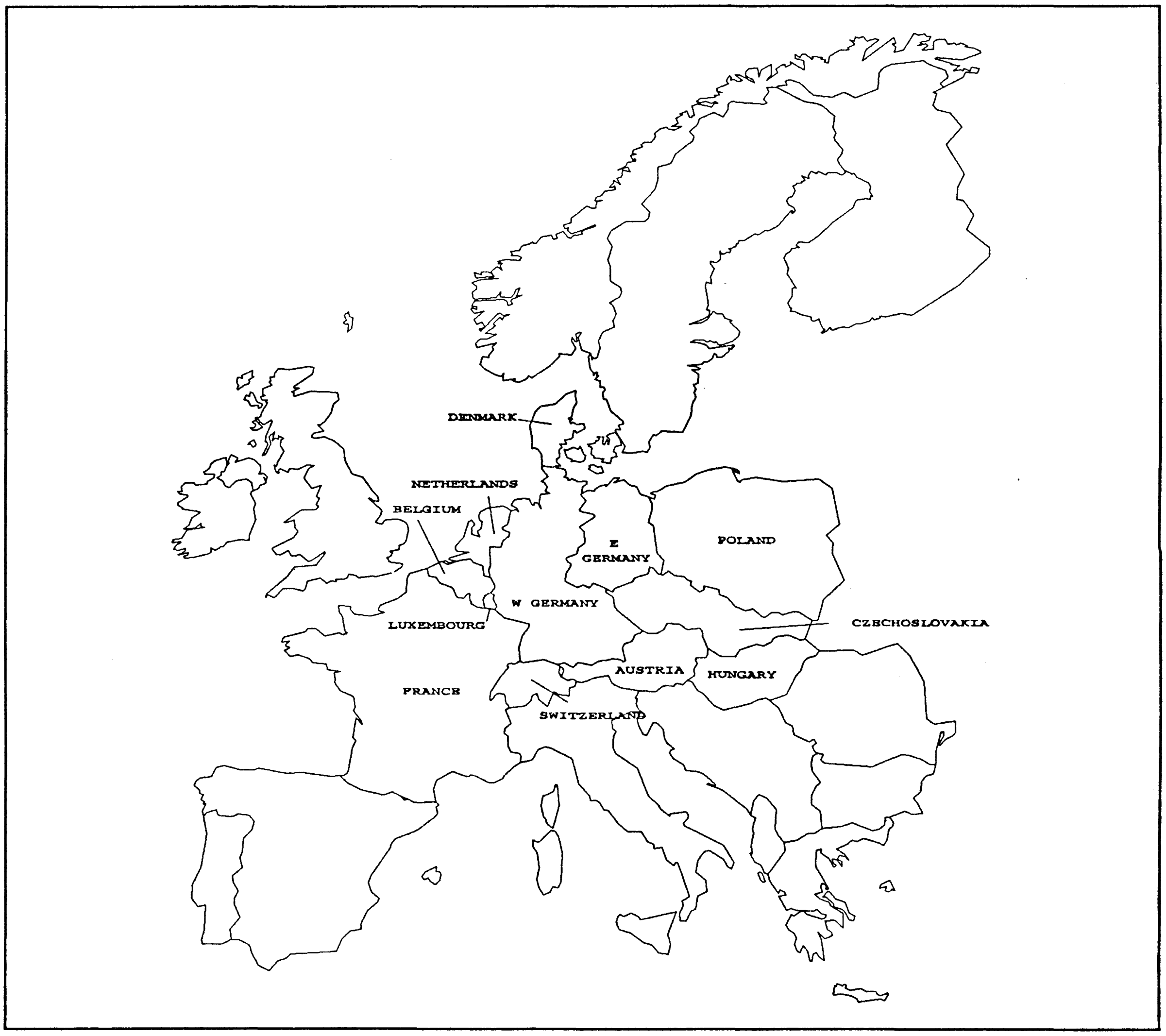

Figure 1. Map of Europe.

Dramatic events in 1989 led to the collapse of the communist system in the German Democratic Republic, the most important of which was the mass migration of GDR citizens to the West where they were given automatic FRG citizenship. In May, 1989 Hungary tested the new Soviet liberalism in east Europe by announcing a dismantling of the Iron Curtain along its Austrian border. The flood of GDR citizens across this border and through various West German embassies in the summer and early fall precipitated the opening of all borders on November 9 and the fall of the German Democratic government. In the first free elections since 1945, GDR citizens voted overwhelmingly in March, 1990 for a fast-track economic, social and political union with West Germany. The entire effort was made possible by President Gorbachev's pledge of Soviet non-interference.

In May 1990 an agreement was reached between the new freely-elected GDR government and the West German government which spelled out details of a monetary, economic and social union which went into effect on July 1st. Formal union was achieved October 3, 1990.

The two economies are compared in Table 1. East Germany is the geographic size of Ohio. Land area in the FRG is almost 2.5 times that in the GDR. The population is 3.5 times as large. The larger FRG economy, almost ten times that of the GDR, reflects not only population but also the per capita GNP gap. Although the GDR was the richest of all East Bloc states, it ranks at the bottom when compared to EC countries, on a par with Spain or Greece.

The exchange rate had been a point of contention since a Western-Soviet currency dispute precipitated the Berlin Blockade in 1948. For some years prior to 1990, the official exchange rate between GDR Ostmarks and FRG Deutschemarks had been strictly controlled in the East at 1:1. More realistic parallel market exchange rates for Deutschemarks valued them from 4 to 10 Ostmarks. Considering the parallel market rate and estimates that place GDR labor productivity at one-third that in the FRG, the monetary agreement was extremely liberal to the East Germans. Personal savings (up to certain limits), salaries and rent were all converted 1:1. Business debt and most other money accounts were converted at two Ostmark to one Deutschemark.

Table 1. Economy Comparisons.

	West Germany (FRG)	East Germany (GDR)
Land Area (million hectares)	24.9	10.8
Population (million)	61	17
GNP (1988 $ billion)	1,130	118
Per Capita GNP (1988 $)	18,526	6,918

Source: Deutsche Bauernverbaud, DDR Agrar Information, Ausgabe 1/2, Feb, 1990.

According to the agreement, all GDR state industries will be reorganized as private firms, corporations or cooperatives. GDR government receipts from privatization of state industries and assets will be used for labor adjustment training, industrial modernization projects and infrastructure improvement. All consumer good subsidies were eliminated including those on food, rent, natural gas, water, electricity and coal. The value-added tax system used in the FRG was implemented in the GDR. The West Germans agreed to cover the 30 billion mark GDR debt.

Political unity involves more players than the two German states. The four victorious powers of World War II have reserved a say in matters of external security. NATO reposturing by the U.S., France and the UK has secured Soviet backing of a united Germany's membership in the Western alliance. In September, all six parties concluded an agreement allowing the GDR to recreate the five pre-World War II regional states. Under the West German Grudgesetz Article 23, these GDR states will vote as one Germany to elect parliamentary representatives and a German chancellor in December.

Agricultural Sector Comparisons

Structural Comparisons

The structural differences in production agriculture between the FRG and the GDR are striking (Table 2). Farms in the Federal Republic are not unlike those in other northern European Community countries. Structurally, European Community farming lags U.S. agriculture (U.S. average farm size 462 acres or 187 hectares), but technologically the northern European Community is on par with the U.S. EC distribution and food processing is likewise equally efficient. A typical West German commercial farm which employs a father and one or two sons and their families is about 60 hectares in size (150 acres) with 35 hectares owned and 25 hectares farmed on a six to nine year lease. Most farms have a quota-controlled, money-making mainstay crop such as a vineyard-wine, or a specialty fruit-vegetable or dairy operation that utilizes possibly 20 hectares and a good deal of labor resources. This leaves 40 hectares of cropland of which 15 hectares might be planted to sugar beets depending on the farmer's quota. The remaining 25 hectares are usually planted to oilseeds and grains. There are 681,000 farms of 1 hectare (2.47 acres) and larger in the FRG.

Table 2. Agricultural Structure Comparisons.

	FRG	GDR
Arable Land (million hectares)	12	6.2
Percent of Total Land (%)	48	57
Workers Employed in Agriculture (%)	5.2	10.1
Agricultural Production Share of GNP (%)	2	10
Number of Farms	681,000	4,650
Size Distribution (%)		
1 - 10 hectares	50	0.1
10 - 20 hectares	20	0.2
20 - 30 hectares	13	0.2
30 - 50 hectares	11	2
50 - 100 hectares	5	2
100 + hectares	0.8	95
Average Size (hectares)	16.6	4,800 (crop) 50(animal)
Ownership (%)		
Private & Cooperative	100	5
State & Collective	0	95

Sources: Bundesministerium für innerdeutsche Beziehungen, Materialien zum Bericht zur Lage der Nation im geteilten Deutschland - Landwirtschaft, 1987 and U.S. Department of Commerce, FET-German Democratic Republic, May 1990.

By contrast, all of East Germany has only 3,250 animal and 1,350 crop operations. Crop and livestock farms are separate in almost every case. They are large state controlled collectives or state owned farms. A typical animal collective is 50 hectares (175 acres) in size, has 1,600 head of livestock and 130 workers. A typical crop collective is 4,800 hectares

(12,000 acres) in size and has 375 workers. Specialization means that livestock farms must purchase considerable feed.

From 1945 to 1949 the Soviets carried out a massive land reform in their sector, confiscating and redistributing any land in excess of 100 hectares per family. From 1950 to 1955 the policy was changed and farmers were forced to contribute all private property to "cooperatives" where production was to be practiced on mass scale. Most farm laborers in the collectives still hold title to the land their family originally contributed, so they are more than simply hired laborers.

Table 2 illustrates some interesting structural differences. The data on land indicate that the GDR is more extensively if not intensively farmed than West Germany. The share of the nation's workers in agriculture, 10 percent in the GDR compared to 5 percent in the FRG, reveals the low labor productivity in East Germany's agriculture. (This compares with 2 percent of U.S. workers employed in agriculture.) The fact that West German agriculture contributes only 2 percent of the GNP with 5 percent of the labor force (compared to 10 percent for both GNP share and labor force share in East Germany) is testimony to the high productivity of nonfarm industry in West Germany. It also recognizes the inability of small farms in the FRG to realize existing economies of size. It does not mean that East German farm workers are more productive.

Productivity Comparisons

Size economies are of some benefit for GDR farming. But as Tables 3, 4 and 5 illustrate, GDR unit productivity lags the FRG considerably. On the basis of the data in Table 3, that lag cannot be attributed to soils and climate. Comparing the average pre-World War II yields in the East and West, GDR farmlands were more productive in every case except sugar beets. In the 1980s productivity in the FRG was higher in every case. Current animal production data in Table 4 indicate higher herd and flock productivity in the FRG. Labor per land area in Table 5 shows lower labor inputs and the normal development pattern over time for West Germany, but from 1975 to 1984 East German labor inputs actually climbed, indicating progressively less productivity.

Table 3. Crop Yield Comparisons, Pre-WW II and Recent.

Crop	FRG		GDR	
	1935-38	1983-88	1935-38	1983-88
	(100 kg/ha)			
Grains	27	59	30	50
Oilseeds	19	29	20	26
Potatoes	185	334	194	234
Sugar Beets	317	490	301	302

Source: Statisches Jahrbuch der DDR, 1988; Statisches Jahrbuch der BRD, 1988; and Trũmmler, Merkel, Blohm, Die Agrarpolitik in Mitteldeutschland und ihre Auswirkungen auf die Production und Verbrauch landwirtschaftlicher Erzeugnisse, 1968.

Table 4. Animal Productivity Comparisons, 1988.

	FRG	GDR
Milk Production (kg) per Cow	5,743	4,020
Egg Production per Hen	261	228

Source: Statisches Jahrbuch der DDR, 1989 and Statisches Jahrbuch der BRD, 1989.

Table 5. Agricultural Labor Comparison in Manpower per 100 Hectares.

Year	FRG	GDR
1970	11.3	13.0
1975	9.4	11.0
1980	8.1	11.8
1984	7.6	12.3

Source: BMB, Materialien zum Bericht zur Lage der Nation im geteilten Deutschland, 1987.

Management Differences

The East German collective food production system has had insurmountable logistical problems. Those will be diminished as the market replaces central planning. Each farm was given a yearly production quota to be delivered to the state processing system on a certain date. Along with the quota, the farm was programmed for machinery, fertilizer, seed, chemical, and other input deliveries from state firms. These inputs rarely arrived on time or in the programmed quantities. They were always low quality, especially the machinery, and there was almost no servicing of equipment when it broke down. Animal farm managers had no say in the quantity and quality of feed production from crop farms. Hog farms often had to slaughter animals because of feed bottlenecks. Transport of harvests from crop collectives broke down and the grain lay in piles and spoiled.

Because there was little sharing of animal with crop collectives, animal manure became a pollutant rather than a fertilizer. Water, sewage and rural road systems were and still are decrepit. Farm laborers had less incentives for work than did owner-operators in the West. Eight-hour work days and regular vacations were the rule. Absenteeism for medical reasons was high.

Private operations in the GDR were of two types: separate holdings and plots on collective farms. Productivity in quantity and quality was much higher on small private holdings than on state and collective farms in the GDR, despite the greater inability to obtain capital inputs and realize size economies on private holdings. Each collective family was allowed half a hectare (1.25 acres) on which to raise crops or livestock for the household. Relatively too little capital was used relative to labor on private operations. Private producers specialized mostly in small animals, fruits and vegetables (Table 6), often sold to the state or in a local market.

Table 6. Proportion of Production Coming from Small Private Operations in the GDR.

Commodity	Percent
Meat	13
Wool	31
Eggs	33
Honey	99
Fruit	33
Vegetables	11

Source: Deutsche Bauernverband, DDR Agrar Information, Ausgabe 1/2, Feb 1990.

Consumption

Self sufficiency was the major goal of East German agricultural policies. Up to 1989 the GDR spent 15 percent of the government budget on agricultural production and food subsidies. In recent years, the GDR had slight surpluses in food grains and livestock products as a result of production subsidies. About 30 percent of their exports of these products was marketed into the EC through West Germany. The 1956 Treaty of Rome which created the EC allowed "German" products from any location to enter Community trade. Most of the remaining 70 percent of GDR exports went to other East Bloc countries. The FRG and the GDR shared production deficiencies in the same crops: certain feed grains, protein feed ingredients, oils, fruits and vegetables.

Consumption of basic food commodities was subsidized in the GDR through mid-1990. That may be one reason why data in Table 7 show higher consumption in the GDR for every commodity except fresh vegetables and poultry meat. Quality of food in the East is a problem, however. East Germans eat more than twice as much potatoes per person. The reader is cautioned that statistics may mislead because of greater waste and because of distorted data in the East.

Table 7. 1988 Consumption Comparisons.

Commodity	FRG Consumption	GDR Consumption
	(kilograms per person)	
Pork	62	64
Beef	22	25
Poultry Meat	11	10
Bread Grains and Meal	65	93
Potatoes	72	147
Fresh Vegetables	77	69

Source: Statisches Jahrbuch der DDR, 1989 and Statisches Jahrbuch der BRD, 1989.

Adjustments to Unification, Price Signals, and European Community Integration

The German Democratic Republic is trying to make the same economic and social adjustments in a matter of months that it took us 40 years to do.

West Berlin Mayor Walter Momper, 29 June 1990.

As shown above, the gap in economic prosperity and efficiency between East and West Germany is large. Western goods are replacing domestic production in the East as consumers shun anything made in the East. Some state firms in the East will fail while others must change dramatically to survive. East German agricultural producer prices will not necessarily be lower after unification. Farm failures will be the result of continued low productivity and higher labor and other input costs rather than low commodity prices. Self-sufficiency in industrial and agricultural production will change to specialization based more on comparative advantage than in the past.

Continued emphasis on formal schooling and long training in the apprentice system in the new Germany will attenuate East German labor adjustments. The West German government has established and staffed retraining schools throughout the GDR. In addition to training, these facilities locate temporary jobs and provide unemployment compensation for displaced workers.

West German labor unions have established themselves in the GDR and are encouraging parity with Western workers in salaries and benefits. This will make GDR labor expensive considering that hourly gross outlay per FRG workers averages DM 35 ($21.35) -- the highest in Europe.

Higher wages constitute a dilemma. On the one hand, higher local wages are needed to retard the mass movement of East Germans workers into the FRG. Workers and their families recognize that the adjustment process may take ten years; they are unwilling to invest that much of their lives in the shabby East with low paying jobs and inadequate services and amenities. On the other hand, the economic union agreement with wages converted at 1:1 has sharply raised real labor costs in the GDR. This cost is not being offset with increased productivity or demand for GDR goods. Most of the increased purchasing power in the GDR is directed toward Western products not previously available. Despite East German production shifts to recapture consumer markets and exploit comparative advantage, unemployment may rise to 25 percent or more. So unemployed workers will have reason to move West until firms and sectors adjust. The German government has set aside billions of Deutschemarks for the modernization, retraining, unemployment compensation and all other expenses the adjustment will require.

European Community (EC) approval of the integration of the GDR economy came quickly and easily. On June 15, 1990 the EC Commission abolished all trade restrictions, thereby establishing a free flow of goods between EC members and the GDR. Rapid approval was granted for good reason. The Community knows that in the long term East Germans, as a part of greater Germany, will more than pay their way. Experts estimate that the integration will mean a one-half percent increase in the aggregate EC GNP in just two years. Even in the shorter term, the GDR will stimulate the Western economies because of export demand created by huge investments in plants and infrastructure and consumer purchasing power from the new-found hard currency wealth of the GDR.

European Community agricultural policies will most affect the GDR. All provisions of the CAP are to be in place in the GDR by December 31, 1990. The Common Agricultural Policy (CAP) is a complex system of import barriers, export subsidies, and other market interventions designed to establish high, rigid market prices for agricultural commodities. These high market prices, fully isolated from world markets, are designed to maintain stable and adequate incomes for EC farmers and to protect them from structural adjustment. Export subsidy expenditures have so exceeded import tariff revenues in recent years that the CAP often has claimed a major share of the total EC budget.

The data in Table 5 indicate that adjustments have taken place in West Germany despite protectionism and price support. Favorable prices encouraging application of more capital inputs and technology have caused massive increases in EC grain and livestock production over the past 25 years. Despite market interventions, farm numbers in the EC have fallen at a faster rate than in the U.S. in recent decades.

So on the west side of the former intra-German border is the structurally (size) inferior but modern and technologically advanced agriculture of the northern European Community. On the other side of the former border is the superior size structure of GDR collectives with relatively better soils and climate but crippling management and logistics problems. What will happen to GDR agriculture as the country is integrated into the EC and the two agricultural sectors merge?

Many European Community producer organizations are frightened of the East German farm potential to achieve economies of size and greater efficiency. They want a breakup and privatization of the farms to include large cuts in farm labor. Additionally, EC producers want significant areas of cropland set aside in permanent pasture and forest before fully integrating East German agriculture.

Self-sufficiency policies pulled some marginal cropland into production which East German collective managers agree should be set aside. Some privatization is taking place as a few farmers with viable size acreage claims are seeking return of their land from the collectives. But most farms collectivized in the 1950s were very small. Four decades later, buildings and facilities have fallen into ruin. And the vast majority of farm laborers enjoy the regular schedule, vacations and absence of risk in their work. Furthermore, it is not exactly clear how one fires a collective member who legally owns part of the operation. Farm laborers have formed a political party which is active in the new GDR government. They claim that the EC is asking sacrifices of them that Western farmers have never been required to make. The party platform insists that GDR agriculture, the system of collective farms and their jobs be protected. The political strength of GDR agriculture workers is evident in a complex system of quotas which has been placed on EC meat, wine, beer, coffee, and chocolate imports to protect the GDR agriculture and food industry. These quotas cannot be retained in an *EC 1992* without internal economic borders.

Price and quality signals are entirely new to East German agriculture. Western agricultural exports to the GDR have increased 900 percent in the last year. Until quality of output and labor productivity improve markedly, East German products may continue to be displaced in domestic markets.

Some East German meat, beverages, processed food, and dairy products presently do not meet EC quality standards, limiting export possibilities for these commodities in the near term. Marketing of most field crops should not be a problem, however. Elimination of self-sufficiency policies will shift production away from sugar beets and toward grains in which the GDR has a comparative advantage.

Trade and Investment Prospects

Although the GDR starts the process better off than any of its East Bloc neighbors, it will also achieve much greater prosperity in a relatively short time. Presumably, existing trade agreements of East Germany with its East Bloc neighbors will remain in force. Hence market access is established in both directions. Successful conversion to a market economy and the gradual attainment of West German prosperity are guaranteed. With 1990 annual economic growth running close to 5 percent, unemployment at 6.9 percent and falling (even with the heavy migrations of 1989), and inflation at 2.3 percent, West Germany could hardly be in better economic form to support East German restructuring and integration.

Factor prices will rise in real terms. Pesticides, fertilizer, and feed components will cost more but will be of higher quality. Labor will be more expensive but machinery costs may be less. A primary reason for an increase in labor per hectare from 1975 (see earlier Table 5) is the age, unavailability, and unreliability of farm machinery. Western machinery, replacement parts, and service will greatly benefit productivity. Most of these inputs will come from Western Europe.

Food Demand

The elimination of food subsidies will raise the real price of food. Some decline in overall consumption quantity is expected but, more importantly, consumption is likely to shift to food products not available until recently. Referring to Table 7, GDR consumer behavior is likely to modernize toward FRG patterns with respect to poultry meat, fresh vegetables, potatoes, and processed foods.

Product quality is only a short-term problem because EC standards will be adopted in the production process and commodities will quickly become "German" rather than Eastern. Given time, the animal-crop collective logistics and productivity problems will solve themselves under the price system. Although commodity terms of trade (ratio of commodity prices to input prices) will fall for some products, productivity gains will more than offset so that factor terms of trade will rise. Despite the GDR farmer's party objection, much of the excess farm labor will be released and the remaining workers will have more incentive to produce efficiently. Even if most GDR collectives are reduced to one-tenth of their present size, they will retain size economies. Farm management skills will improve and consumption patterns will shift to a wider variety of foods, most of which can be supplied by producers in the 12-nation EC. Thus opportunities for commercial food exports to East Germany will be limited. Some high-value products such as breakfast cereals will be supplied by American companies located elsewhere in Europe. These plants are the result of American direct investment and supplied with local ingredients rather than from imported American commodities.

U.S. Investment Opportunities

Business opportunities are greatest when significant change is occurring, when trends are understood and when risks are low. The East German situation is unique even in the incredibly dynamic Europe of 1990. Economic change in the GDR is happening at a faster rate than anywhere in the world.

Barriers to investment are formidable nearly everywhere in the East Bloc, but less so in East Germany. In mid-June, 1990 FRG Economics Minister Haussmann expressed his disappointment at the lack of West German investment in the GDR. He claims much more activity is needed from the private sector. The U.S. Commerce Department agrees, saying that the investment needs in the GDR will be several hundred billion dollars over the next five to ten years. This is well beyond West German capacity. As of 1 July 1990 only 2 percent of the 8,000 state-owned firms in the GDR have joint venture agreements with Western firms. Clearly there is room for U.S. investment.

Changes mentioned earlier have contributed to increased purchasing power and demand for goods and services such as telecommunications systems, roads, rail systems, water treatment and sewage facilities, office automation, private housing, management and marketing consulting services and efficient, dependable energy systems. With 90 percent of FRG 1989 productive capacity utilized and given the country's commitment to assist Eastern

Europe, financial and real investment goods will have to come from places in addition to West Germany.

Demand by the GDR will be strong for machinery and equipment, farm chemicals and fertilizer, livestock semen, the capability to preform embryo exchange for livestock breeders, farm management computer systems, market information services, production and marketing consultation, and food processing equipment. The greatest opportunities for investment in GDR will be in the manufacture, sale and service of crop and livestock production equipment, power generation and heating systems, and food processing facilities. U.S. farming hardware and production management tools are especially well suited to GDR agriculture because of the relatively large farm size in both countries.

Prior to 1990, GDR farms delivered their products to state distributors with no questions asked. Today collective managers are desperately trying to market their products domestically and internationally. They have very few contacts in international trading firms or in the EC distribution and processing industry. They have no market news services and they wouldn't know how to hedge their production even if they had access to a futures market. Marketing skills and tools are needed immediately. As efficiency and productivity increase, so will exportable surpluses and the problem of finding markets.

Although the size of the East German economy limits the market for products and services, access to agricultural producers and processors in other EC countries and East Bloc countries holds potential for expansion. With the CAP and East Bloc providing demand for products, the challenge for East Germany will be to make the investments and technological changes and input restructuring essential to make a profit.